

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Louis B. Rosenberg
Application No. : 09/823,943
For : **Haptic Remote Control for Toys**
Filed : March 30, 2001
Examiner : Urszula M. Cegielnik
Art Unit : 3711

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

This is an Appeal Brief filed under 37 C.F.R. § 41.37 in connection with the final rejection of claims 45-58 in the Final Office Action mailed October 20, 2006. Each of the topics required by 37 C.F.R. § 41.37 is presented herewith and labeled appropriately.

Real Party in Interest

The real party in interest in the present application is the assignee, Immersion Corporation, 801 Fox Lane, San Jose, California 95131 (hereinafter "Appellant").

Related Appeals and Interferences

Applicant knows of no other appeals or interferences related to the present application.

Status of Claims

Claims 45-58 stand finally rejected and are the substance of this appeal. Applicant cancelled claims 1-44 during the prosecution of this application. The final rejection of claims 45-58 (shown in attached Appendix A) is appealed.

Status of Amendments

Applicant did not seek to amend the application after final rejection.

Summary of the Claimed Subject Matter

Claim 45 is the sole pending independent claim.

Claim 45 recites a device that is generally useful for controlling a remote-controlled device, and providing haptic feedback to the user associated with a state, or the status, of the remotely-controlled device. *See* Specification, Paragraph 8. For example, in one embodiment, the claimed device may be a remote control that can generate a haptic effect when a remotely-controlled vehicle, such as a remote-controlled car, strikes an object. *See* Specification Paragraph 6. In such an embodiment, other status information may be detected by the remotely-controlled device and sent to the device, including a degree of contact, an amount of acceleration experienced by the toy device, a tight turn, an amount of braking, or other states of the remotely-controlled device. *See* Specification, Paragraphs 6, 42, and 43. Such a device may provide a user with a richer experience for a user controlling a remotely-controlled device.

Claim 45 first recites “a housing” and “a manipulandum disposed within the housing, and operable to cause a control signal to be sent to a remotely-controlled device.” For example, the manipulandum may be a joystick or lever, or another input device, such as buttons, steering wheels, knobs, dials, trackballs, and other types of manipulanda. *See* Specification, Paragraph 18. The manipulandum may be employed to control a remotely-controlled device, such as a remote-control car. *See* Specification, Paragraphs 18, 21.

The device of claim 45 further comprises “an actuator coupled to said housing, said actuator operable to output a haptic sensation to at least one of said housing or said manipulandum.” The actuator may be one of many different kinds of actuators, including without limitation eccentric rotating masses, linear voice coil actuators, or solenoids. *See*

Specification, Paragraphs 37, 38. The actuator generates haptic effects based on a received actuator signal.

Claim 45 further recites “a receiver disposed within said housing and operable to receive a sensor signal from a sensor configured to sense a state of said remotely-controlled device.” The receiver allows the remote control device to receive status information from the remotely-controlled toy. The remote control device may then generate haptic effects based on the status information. For example, one or more sensors may be mounted on a remotely-controlled toy, such as a remote-controlled car. In such an embodiment, a sensor may be mounted on the front bumper of the car, which may cause a signal to be transmitted to the remote control device when the car collides with an object. The signal may be received by the receiver and then sent to a processor. *See* Specification, Paragraphs 47-51.

Claim 45 finally recites “a processor disposed within said housing in communication with said actuator and said receiver, said processor operable to generate an actuator signal associated with said state of said remotely-controlled device, said actuator signal operable to cause said actuator to output said haptic sensation.” The processor may receive the signal from the receiver and generate an actuator signal, based on the signal, configured to cause the actuator to output a haptic effect. For example, the processor may generate an actuator signal that may cause the actuator to shake the remote control to indicate a collision. *See* Specification, Paragraphs 47-75.

The above description of the claimed subject matter is intended to provide the reader with an overview of embodiments of the present invention, but is not intended to in any way limit the scope of the claimed invention.

Grounds of Rejection to be Reviewed on Appeal

The Examiner rejected claims 45-50 and 55-57 under 35 U.S.C. § 103(a) as being unpatentable over European Patent Publication No. 0977142 to Koninklijke Philips Electronics N.V. (“Philips”) in view of British Patent Publication No. 2237160 to Cheetah International Ltd. (“Cheetah”). The Examiner rejected claims 51-54, 57, and 58 under 35 U.S.C. § 103(a) as being unpatentable over Philips in view of Cheetah and further in view of U.S. Patent No. 4,964,837 to Collier (“Collier”). The issues presented for consideration in this appeal are as follows:

1. Whether the Examiner erred in rejecting claims 45-50 and 55-57 under 35 U.S.C. § 103(a) as being unpatentable over Philips in view of Cheetah.

2. Whether the Examiner erred in rejecting claims 51-54, 57, and 58 under 35 U.S.C. § 103(a) as being unpatentable over Philips in view of Cheetah and further in view of Collier.

Argument

Issue 1: Whether the Examiner erred in rejecting claims 45-50 and 55-57 under 35 U.S.C. § 103(a) as being unpatentable over Philips in view of Cheetah.

The rejection of claims 45-50 and 55-57 under 35 U.S.C. § 103(a) as being unpatentable over Philips in view of Cheetah should be reversed because the combined references do not teach or suggest each and every element of the claimed invention.

To sustain a rejection under 35 U.S.C. § 103(a), the combined references must teach or suggest each and every element of the claimed invention. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Because Philips in view of Cheetah does not teach or suggest “a receiver disposed within said housing and operable to receive a sensor signal from a sensor configured to sense a state of said remotely-controlled device” as recited in claim 45, claim 45 is patentable over the combined references.

As the Examiner notes on page 2 of the October 20, 2006 Office Action, “EP ‘142 [Philips] does not disclose a receiver disposed within the housing and operable to receive a sensor signal from a sensor configured to sense a state of the remotely controlled device.” The Examiner then asserts that “UK ‘160 [Cheetah] discloses a receiver disposed within a housing and operable to receive a sensor signal (i.e. infra-red link).” Applicant disagrees.

The Examiner cites to page 2 of Cheetah for support for her assertion. However, Cheetah discloses that the components of the infra-red link include an infra-red transmitter, but not a receiver. Further, while Cheetah discloses a receiver, the receiver is a radio receiver for receiving radio transmissions from a typical radio station on one of three different bands: medium and long wave AM, as well as VHF FM. Thus, the Cheetah apparatus may be accurately characterized as a wireless joystick (capable of transmitting only) having an AM/FM radio; an assertion supported by the abstract which states that the device is a “combination of a joystick used with a computer for playing computer games and a radio receiver.” *See Cheetah, Abstract*. There is no disclosure in Cheetah of a receiver for receiving sensor signals associated

with the state of a remotely controlled device. Thus, Philips in view of Cheetah does not teach or suggest “a receiver disposed within said housing and operable to receive a sensor signal from a sensor configured to sense a state of said remotely-controlled device” as recited in claim 45.

Applicant respectfully requests the rejection of claim 45 be reversed.

Because claims 46-50 and 55-57 depend from and further limit claim 45, claims 46-50 and 55-57 are each patentable over Philips in view of Cheetah for at least the same reason.

Applicant respectfully requests the rejections of claims 46-50 and 55-57 be reversed.

Issue 2: Whether the Examiner erred in rejecting claims 51-54, 57, and 58 under 35 U.S.C. § 103(a) as being unpatentable over Philips in view of Cheetah and further in view of Collier.

The rejection of claims 51-54, 57, and 58 under 35 U.S.C. § 103(a) as being unpatentable over Philips in view of Cheetah and further in view of Collier should be reversed because the combined references do not teach or suggest each and every element of the claimed invention.

To sustain a rejection under 35 U.S.C. § 103(a), the combined references must teach or suggest each and every element of the claimed invention. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Because Philips in view of Cheetah and further in view of Collier does not teach or suggest “a receiver disposed within said housing and operable to receive a sensor signal from a sensor configured to sense a state of said remotely-controlled device” as recited in claim 45, from which claims 51-54, 57, and 58 depend, claims 51-54, 57, and 58 are patentable over the combined references.

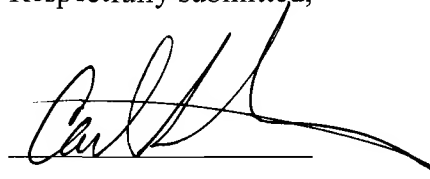
As discussed above with respect to claim 45, Philips in view of Cheetah does not teach or suggest “a receiver disposed within said housing and operable to receive a sensor signal from a sensor configured to sense a state of said remotely-controlled device.” Collier does not cure this deficiency. Collier teaches a remote controlled car having a speaker, where the car generates sound effects corresponding to events, such as screeching tires or collisions. However, Collier does not disclose a remote control having “a receiver disposed within said housing and operable to receive a sensor signal from a sensor configured to sense a state of said remotely-controlled device” as recited in claim 45. Thus, the combined references do not teach or suggest each and

every element of claim 45, from which claims 51-54, 57, and 58 depend. Applicant respectfully requests the Examiner withdraw the rejection of claims 51-54, 57, and 58.

Conclusion

In view of the foregoing, it is submitted that the rejection of claims 45-58 is improper and should not be sustained. Therefore, a reversal of the Final rejection is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Carl Sanders', is written over a horizontal line.

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Date: March 22, 2007

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Appendix A – Claims

45. A device comprising:
a housing;
a manipulandum disposed within said housing and operable to cause a control signal to be sent to a remotely-controlled device;
an actuator coupled to said housing, said actuator operable to output a haptic sensation to at least one of said housing or said manipulandum;
a receiver disposed within said housing and operable to receive a sensor signal from a sensor configured to sense a state of said remotely-controlled device; and
a processor disposed within said housing in communication with said actuator and said receiver, said processor operable to generate an actuator signal associated with said state of said remotely-controlled device, said actuator signal operable to cause said actuator to output said haptic sensation.
46. A device as recited in claim 45, wherein said actuator comprises an inertial mass actuator.
47. A device as recited in claim 45, wherein said manipulandum includes a lever movable along an axis.
48. A device as recited in claim 45, wherein said control signals comprises a wireless control signal.
49. A device as recited in claim 48, wherein said wireless control signals comprises a radio frequency (RF) signal.
50. A device as received in claim 45, wherein said sensor signal from said remotely-controlled device is associated with one of: a movement of said remotely-controlled device and a contact between said remotely-controlled device and a physical object.

51. A device as recited in claim 45, wherein said remotely-controlled device comprises:
a transmitter in communication with said sensor.
52. A device as recited in claim 51, wherein said sensor comprises a contact sensor.
53. A device as recited in claim 51, wherein said sensor comprises a pressure sensor.
54. A device as recited in claim 51, wherein said sensor comprises an accelerometer.
55. A device as recited in claim 45, wherein said manipulandum comprises a throttle control.
56. A device as recited in claim 45, wherein said manipulandum comprises a directional control.
57. A device as recited in claim 45, wherein said remotely-controlled device comprises a remotely-controlled toy.
58. A device as recited in claim 45, wherein said remotely-controlled device comprises a remotely-controlled car.

Appendix B – Evidence

None.

Appendix C – Related Proceedings

None.